

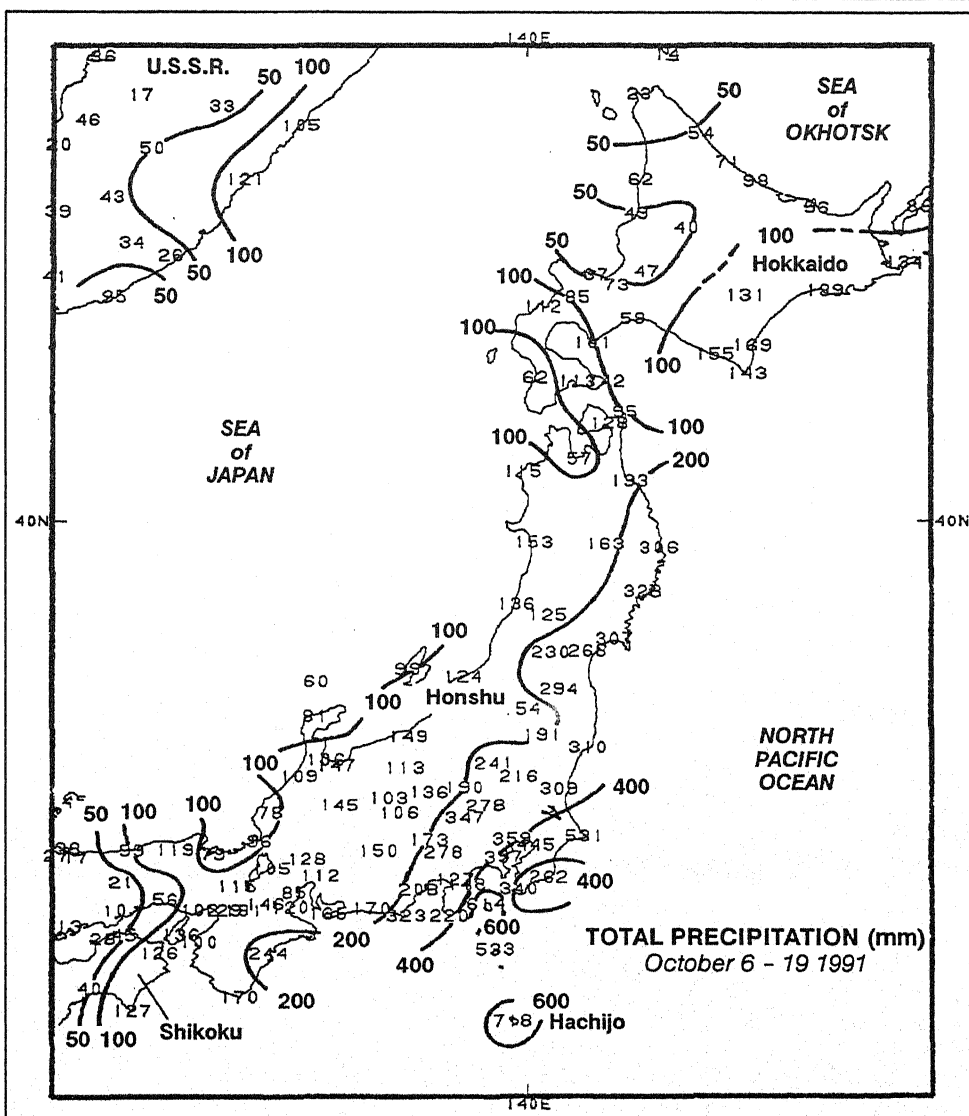
CONTAINS:
SEPTEMBER 1991
GLOBAL
CLIMATE
ANOMALIES

WEEKLY CLIMATE BULLETIN

No. 91/42

Washington, DC

October 19, 1991



Very heavy rains of 200 – 600 mm (2 to 5 times the normal) have pounded eastern Honshu during the last two weeks, with totals exceeding 700 mm on a few offshore islands southeast of Tokyo. The southeastern third of Honshu received 90 – 190 mm during October 13 – 19 following torrential cloud bursts associated with Typhoon Orchid that dumped 150 – 400 mm on the region during the previous week. Most locations reported 150 – 425 mm above normal rainfall during October 6 – 19, 1991 as widespread flooding continued to plague Tokyo and eastern Honshu, according to press reports. Orchid is the seventh tropical cyclone to affect Japan since August 18.



UNITED STATES DEPARTMENT OF COMMERCE
 NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
 NATIONAL WEATHER SERVICE–NATIONAL METEOROLOGICAL CENTER
CLIMATE ANALYSIS CENTER



GLOBAL CLIMATE HIGHLIGHTS

MAJOR CLIMATIC EVENTS AND ANOMALIES AS OF OCTOBER 17, 1992

1. Western Canada and North-Central United States:

COLD AIR SHIFTS SOUTHEASTWARD.

Bitterly cold air invaded much of the north-central states and western Canada, where temperatures averaged as much as 11°C below normal. Lows plummeted to -28°C in the Yukon Territories [15 weeks].

2. Southwestern United States:

MORE HOT WEATHER.

Temperatures averaged up to 4°C above normal in parts of California, Arizona, and Nevada as highs soared to 40°C in the desert Southwest [4 weeks].

3. Southern France and Northern Italy:

HEAVY RAINS CONTINUE TO PLAGUE REGION.

Torrential rains, with daily totals reaching 140 mm, inundated northwestern Italy while approximately 150 mm drenched Corsica and 95 mm soaked Sardinia. Elsewhere, moderate rains (50 to 90 mm) were reported as the wet spell continued [3 weeks].

4. Greece and Western Turkey:

STILL TOO DRY.

Another dry week was characterized by little or no rainfall in the region as six-week moisture deficits ranged from 50 to 85 mm [28 weeks].

5. Southwestern Asia:

WARMER IN TURKEY, BUT STILL COOL FARTHER EAST.

Temperatures averaged as much as 5°C above normal in Turkey, but cold weather continued in Iran, where departures remained near -6°C [Ending at 4 weeks].

6. Western Sahel:

RAINY SEASON ENDS EARLY.

Weekly precipitation totals were generally less than 20 mm, but short-term moisture shortages improved as weekly normals continued to decline. Temperatures averaged near 4°C above normal at a few locations [Ended at 13 weeks].

7. Vietnam and Thailand:

MORE HEAVY RAINS.

Torrential cloudbursts inundated the region for a second consecutive week. Up to 180 mm of rain fell as moisture surpluses climbed to 500 mm at some locations [2 weeks].

8. Southeastern China:

DRY CONDITIONS PERSIST.

Little or no precipitation fell in the region, except along the immediate coast. Precipitation shortfalls since early September ranged from 100 to 210 mm in a few areas [15 weeks].

9. Southern Australia:

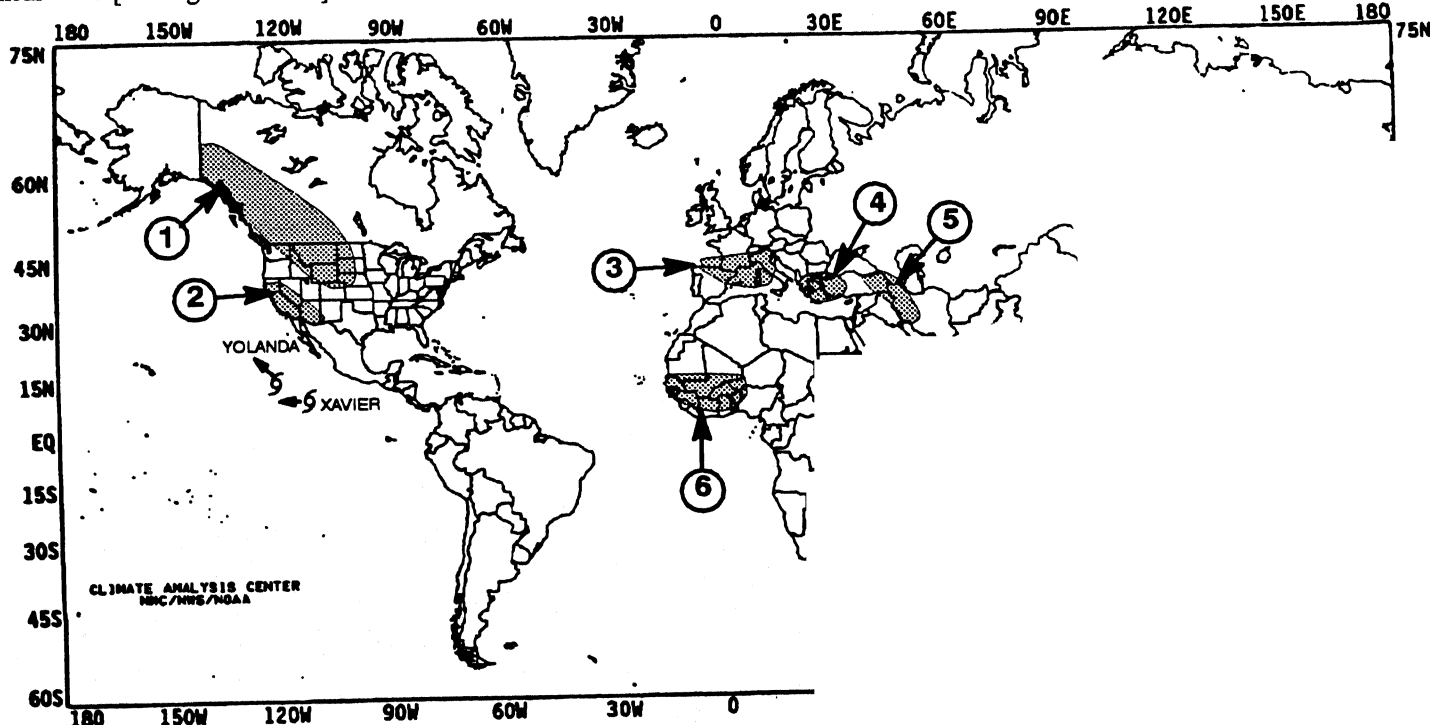
ABNORMALLY WET WEATHER CONTINUES.

Between 15 and 50 mm of rain dampened the area as six-week totals reached 220 to 415 percent of normal [5 weeks].

10. Northeastern Australia:

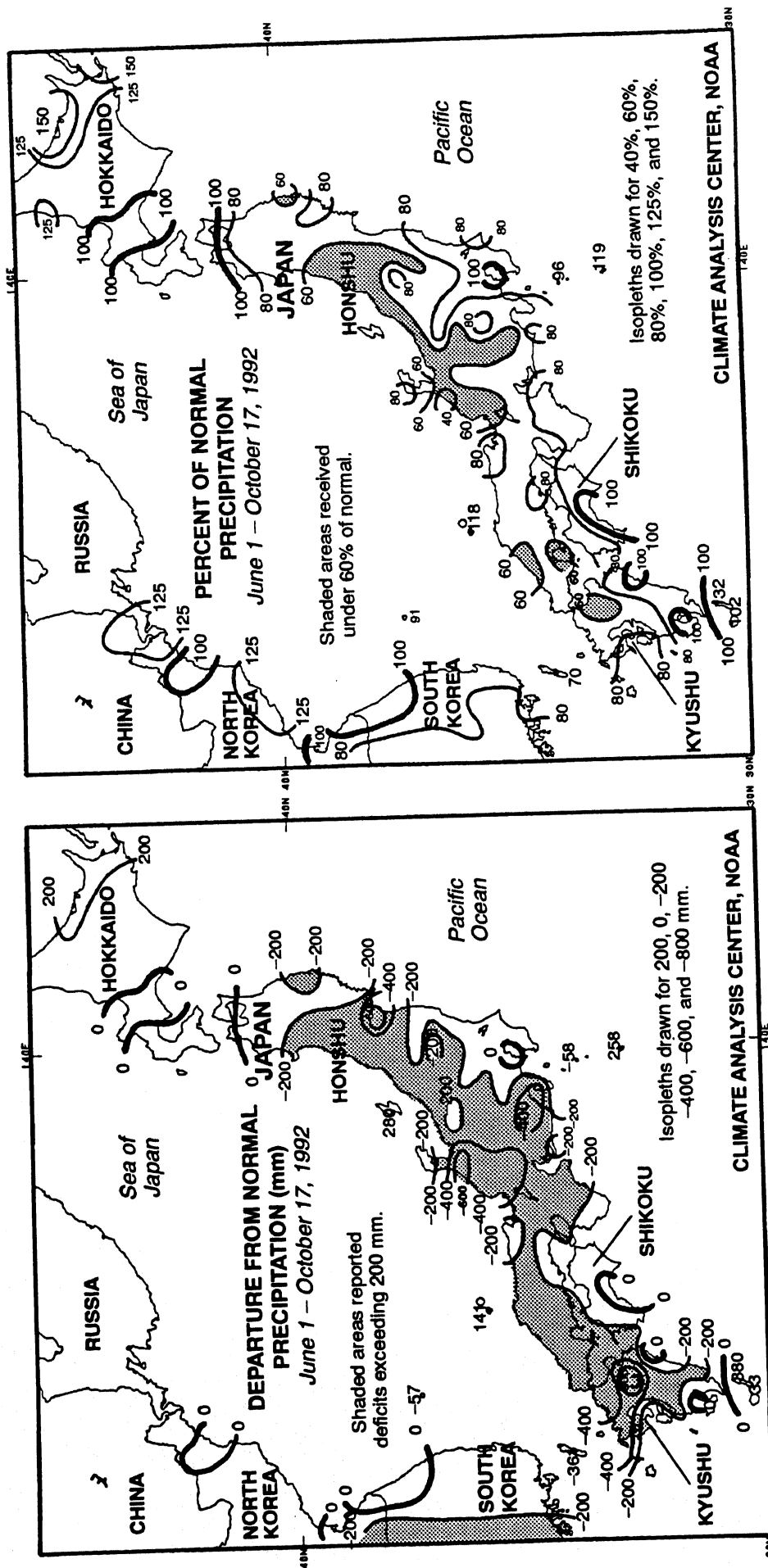
RAINY SEASON STARTS SLOWLY.

Only scattered precipitation totals of 10 to 35 mm were reported during the last four weeks (compared to normal values of 15 to 75 mm), with many stations receiving under 10 mm [4 weeks].



EXPLANATION

TEXT: Approximate duration of anomalies is in brackets. Precipitation amount
 MAP: Approximate locations of major anomalies and episodic events are shown
 temperature anomalies, four week precipitation anomalies, long-term anomalies



A LACK OF TROPICAL SYSTEMS CONTRIBUTES TO A DRIER THAN NORMAL SUMMER AND EARLY AUTUMN ACROSS JAPAN.

Acute short-term dryness has not been a problem, but a prolonged pattern of below normal rainfall has affected the islands since the beginning of meteorological summer (June), primarily due to a lack of significant tropical systems moving through the country. Most areas southwest of northern Honshu received 200 to 800 mm less than normal rainfall during the last 4 1/2 months, with totals ranging from 550 mm in northwestern areas to over 2000 mm in higher elevations and along the southern coastlines of Shikoku and Kyushu. The largest deficits accumulated in northern Kyushu and through west-central and northeastern Honshu. This pattern contrasts strongly with last year's late summer and early autumn barrage of tropical systems. Over a dozen tropical storms and typhoons passed over or close to the islands during mid-August through October, dumping copious amounts of rain through most of the nation (see Weekly Climate Bulletin #91/39, dated Sep. 28, 1991, and # 92/41, dated Oct. 19, 1991, for more details). While moisture shortages accumulated farther south, most of Hokkaido measured abundant amounts of rain during the aforementioned period. Surpluses exceeded 200 mm at some eastern stations.

UNITED STATES WEEKLY CLIMATE HIGHLIGHTS

FOR THE WEEK OF OCTOBER 11-17 1992

The week was marked by wintry weather across the northern tier of the contiguous U.S. as a blast of Arctic air plunged southward out of Canada. Heavy snow blanketed the northern Rockies and Great Lakes with up to a foot reported at Red Lodge, MT. Lows in the teens prevailed from Washington eastward to Minnesota while subfreezing temperatures dipped as far south as northern Texas. More than a dozen record daily lows were established on the 14th and 15th from the Northwest to the northern Plains, including a low of 19°F at Spokane, WA. In sharp contrast, summerlike warmth dominated parts of the Far West and southern Intermountain West. Numerous record daily highs were set as readings soared to near 100°F from Arizona to the interior valleys of California. On Sunday, the mercury reached 80°F for the eighth consecutive day at San Francisco while Sacramento observed a record of 96°F. Elsewhere, strong thunderstorms generated heavy rain, hail and tornadoes from the southern Plains to the Midwest. More than 4 inches of rain soaked southeastern Missouri on Thursday, causing localized flooding. Meanwhile, abnormally cold conditions gripped the eastern half of Alaska. Several record daily lows were established as temperatures plunged below zero. The low at Northway, AK plunged to -8°F on Tuesday, and Juneau endured a fifth consecutive day of record cold when the mercury dropped to 20°F. In Hawaii, heavy rain soaked portions of Kauai, with more than 5 inches recorded at Lihue.

The week commenced with unseasonably warm and relatively tranquil conditions across the Southwest as a large dome of high pressure settled across the western half of the nation. Temperatures soared into the nineties across parts of Arizona and California, yielding more than a dozen record daily highs Sunday through Tuesday. Farther east, a fast-moving low raced through the Midwest and Great Lakes while its trailing cold front swept across the eastern U.S. Showers and thunderstorms accompanied the system from the mid-Atlantic to the Northeast. Behind the system, unseasonably cold weather settled into the Southeast, establishing record lows as readings dipped into the thirties. Farther north, record cold dominated eastern Alaska while heavy snow blanketed southeastern sections of the state.

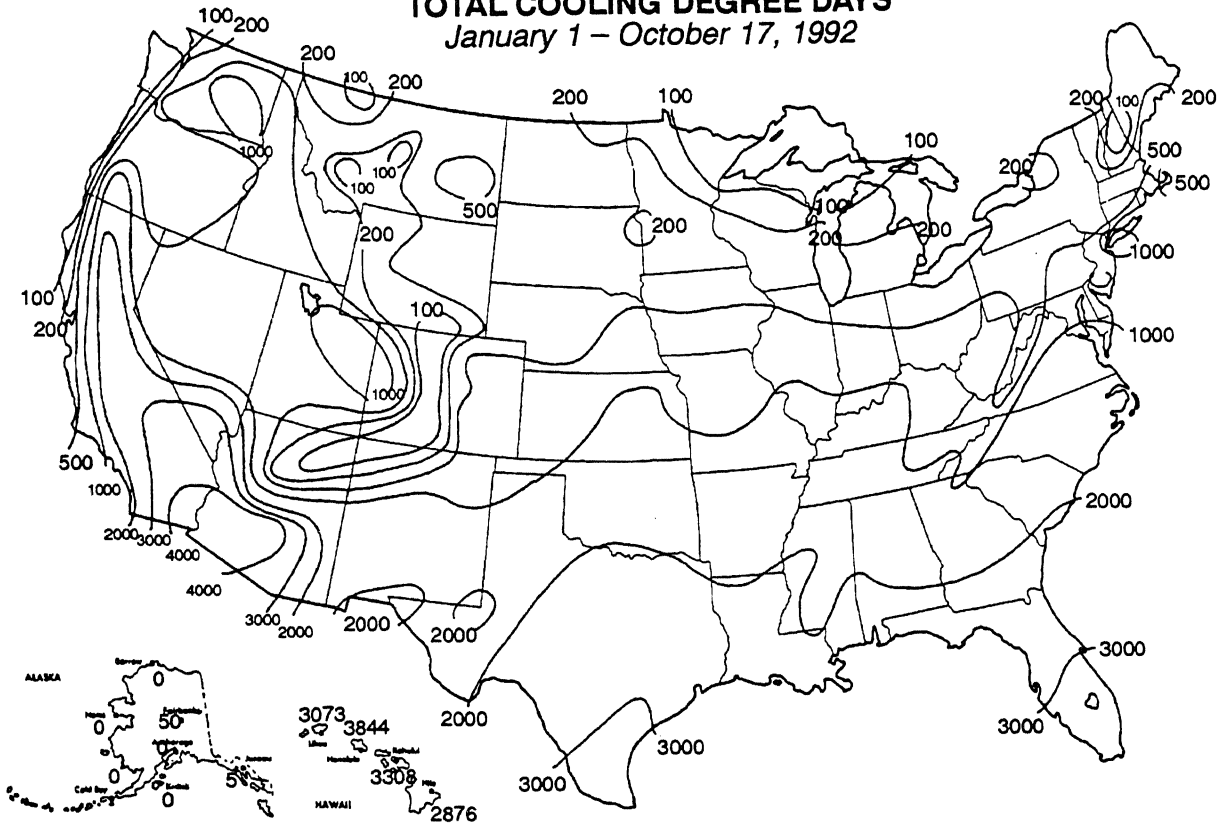
During the last half of the week, wintry weather affected the northern tier of the U.S. Heavy snow covered parts of Montana and Wyoming on Wednesday and Thursday, with more than half a foot measured at several locations. On Friday, heavy snow moved eastward as up to 8 inches buried parts of Marquette County, MI. Frigid Arctic air settled southward out of Canada behind the system, producing lows in the single digits across parts of North Dakota and subfreezing readings as far south as the southern Plains. Strong thunderstorms erupted along and ahead of the leading edge of cold air as it pushed into the

Mississippi Valley. Heavy rain caused localized flooding across parts of Missouri, Kentucky and Illinois. More than 5 inches of rain soaked Morley, MO on Thursday. Severe thunderstorms also generated hail and wind gusts to 70 mph across the southern Plains and tornadoes in Texas and Mississippi. Warm air preceded the cold front, producing record highs from Texas to North Carolina as readings soared into the eighties as far north as the mid-Atlantic. In Alaska, unusually cold conditions persisted as readings dropped into the teens in southeastern sections. Several record daily lows were set, including a fifth consecutive day with record minimum temperatures at Yakutat when the mercury sunk to 13°F on Saturday morning.

According to the River Forecast Centers, the greatest weekly precipitation totals (more than 2 inches) were limited to scattered locations in the eastern half of Texas, the middle Mississippi and Ohio Valleys, the lower Great Lakes, and Hawaii. Light to moderate amounts were recorded across the Northeast, the remainder of the Great Lakes, most of the Ohio, Mississippi, and Tennessee Valleys, the middle and southern Atlantic, the southern half of Florida, the northern and central Rockies, the southern two-thirds of Alaska, and most of Hawaii. Little or no precipitation fell in the southern Appalachians, northern Florida, the remainders of the Great Plains and Rockies, the Far West, northern Alaska, and eastern Hawaii.

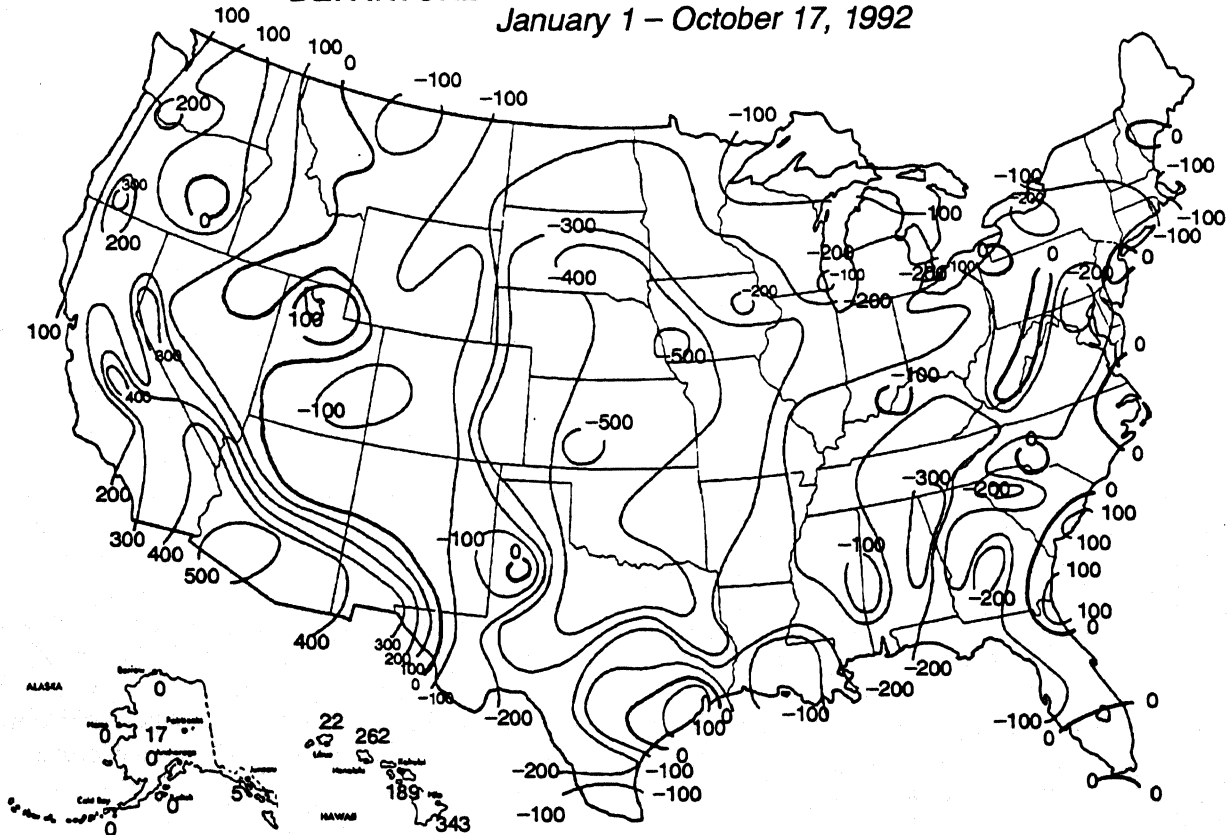
Unseasonably warm weather dominated from the lower Mississippi Valley westward to the southern two-thirds of the West Coast. Weekly departures of +4°F to +8°F were common from the Rio Grande Valley northwestward across the southern Plateau and into northern California. Near to slightly above normal temperatures enveloped the northern half of the Atlantic Coast, the central Appalachians, the southern half of Florida, the lower Mississippi Valley, the central and northern Rockies. Farther

TOTAL COOLING DEGREE DAYS January 1 – October 17, 1992



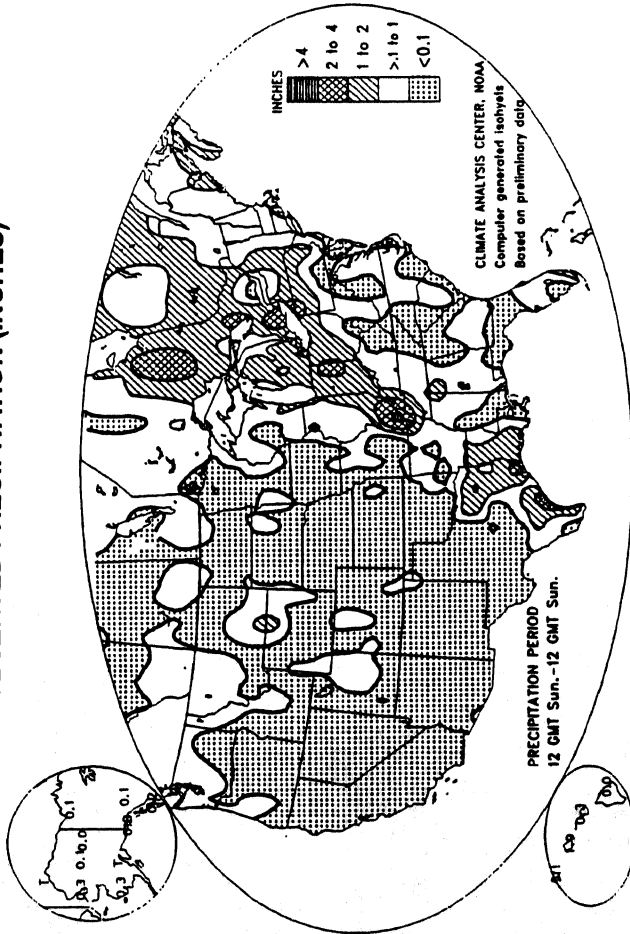
More than 4000 cooling degree days (CDD's) accumulated in portions of the desert Southwest since the beginning of the 1992 cooling season while fewer than 100 CDD's were reported along the northern half of the Pacific Coast, across the northern Great Lakes, and in the higher elevations of the Rockies and northern Appalachians (top). Cooling demand was considerably below normal throughout the nation's midsection and in parts of the Southeast and mid-Atlantic, primarily due to the exceptionally cool Summer. In sharp contrast, above normal cooling demand was recorded through much of the Far West, with CDD totals reaching 900 above normal in portions of the desert Southwest (bottom).

DEPARTURE FROM NORMAL COOLING DEGREE DAYS January 1 – October 17, 1992

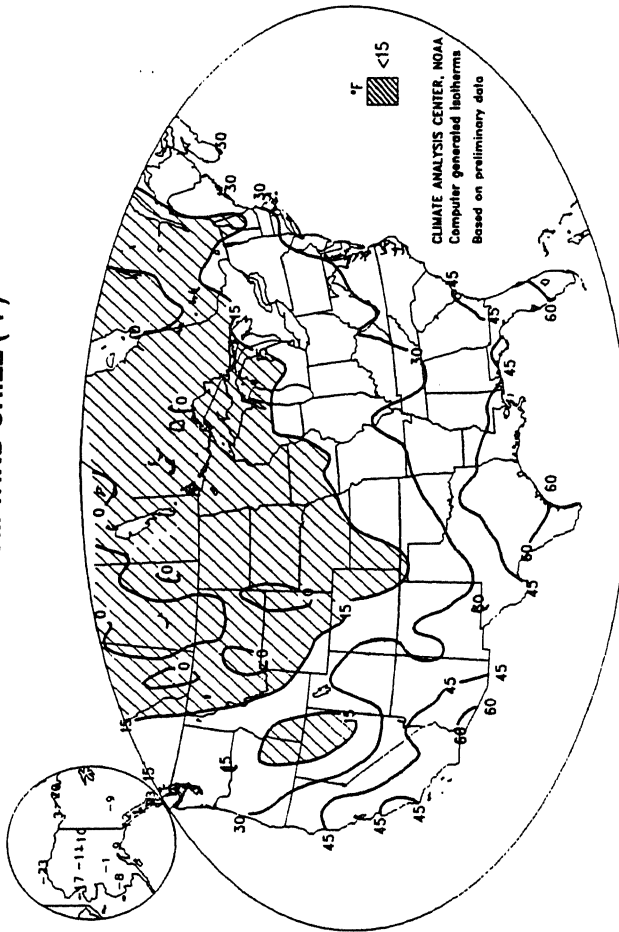


UNITED STATES WEEKLY CLIMATE CONDITIONS (October 11 – 17, 1992)

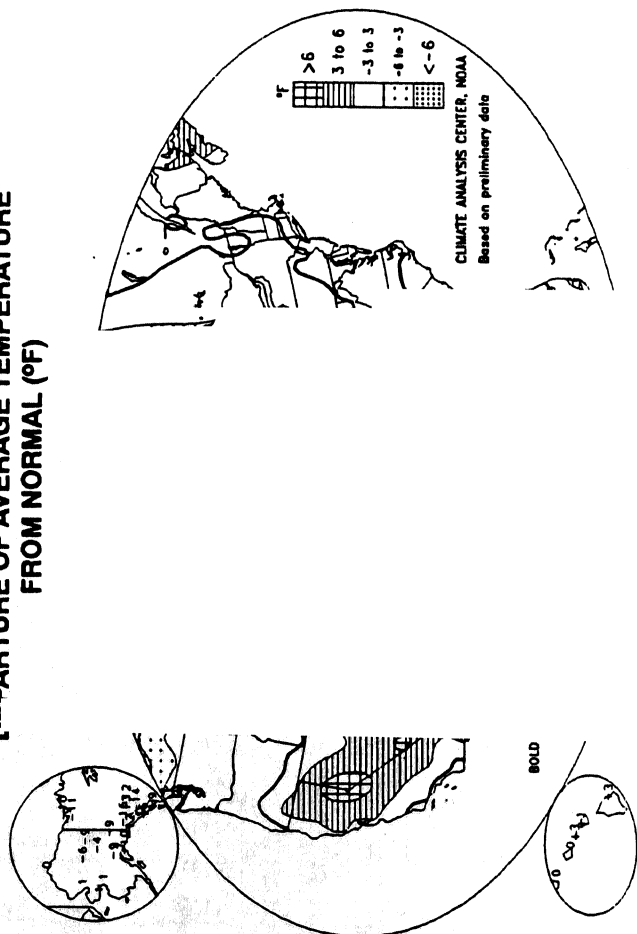
OBSERVED PRECIPITATION (INCHES)



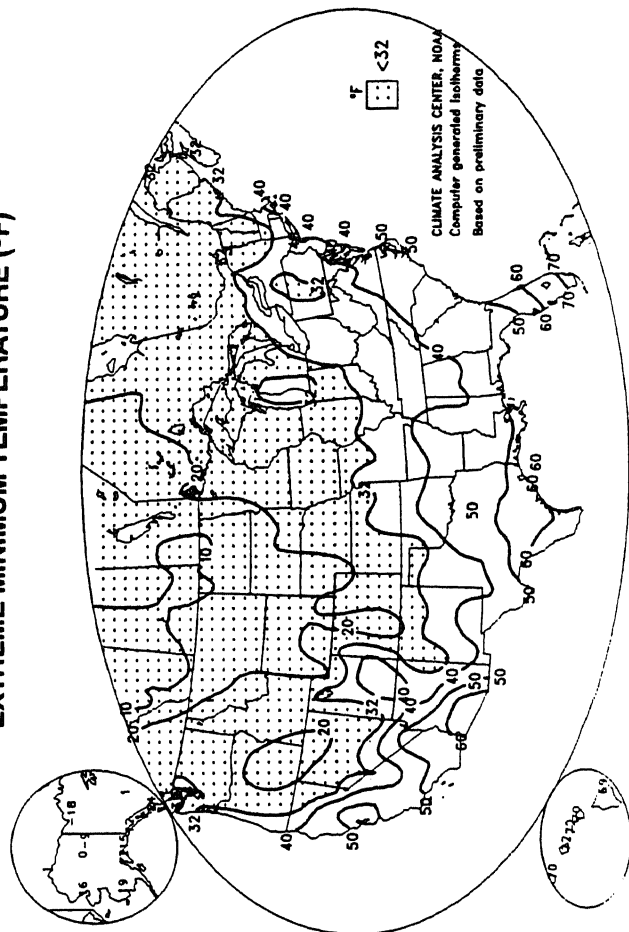
MINIMUM WIND CHILL (°F)



DEPARTURE OF AVERAGE TEMPERATURE
FROM NORMAL (°F)

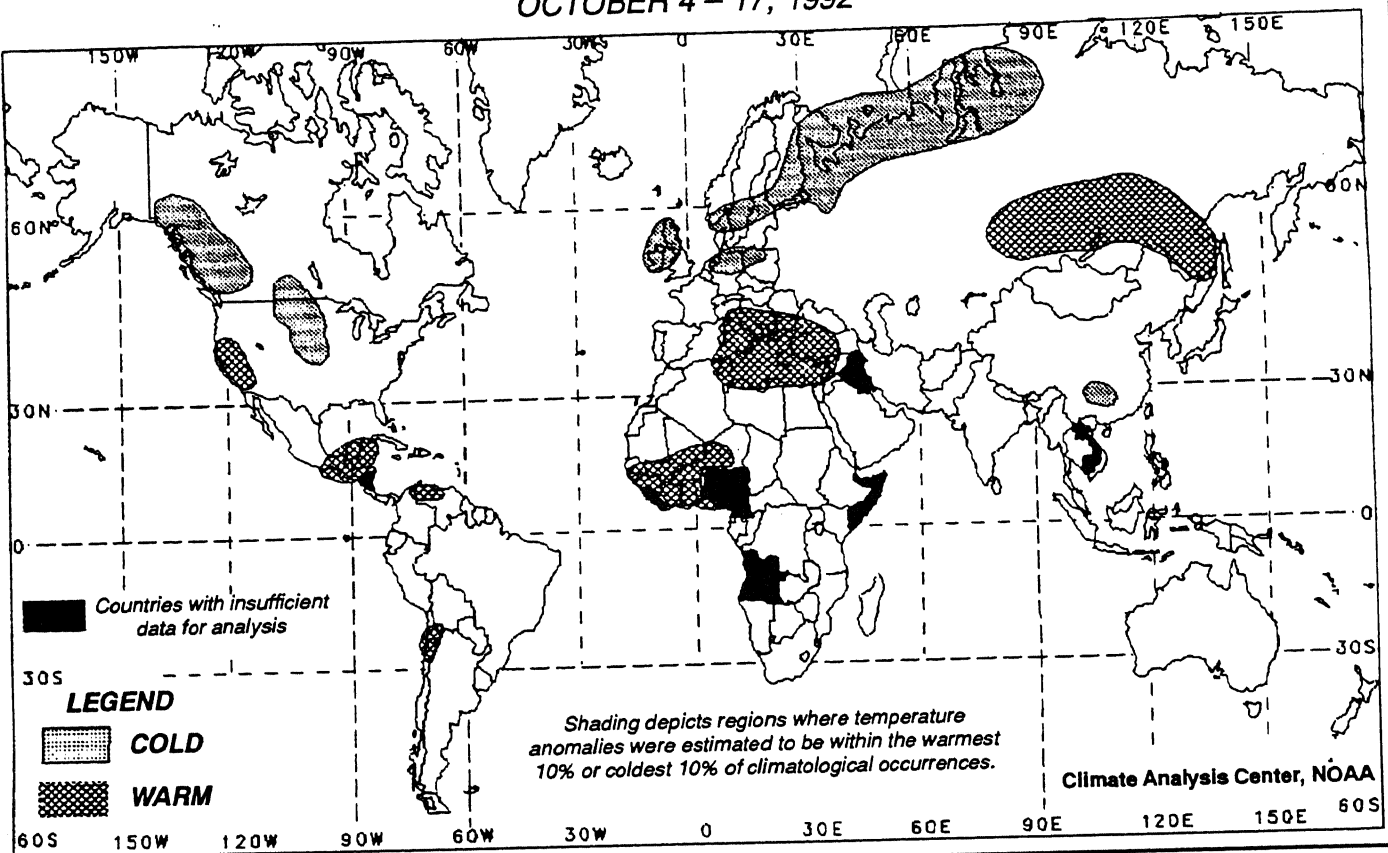


EXTREME MINIMUM TEMPERATURE (°F)



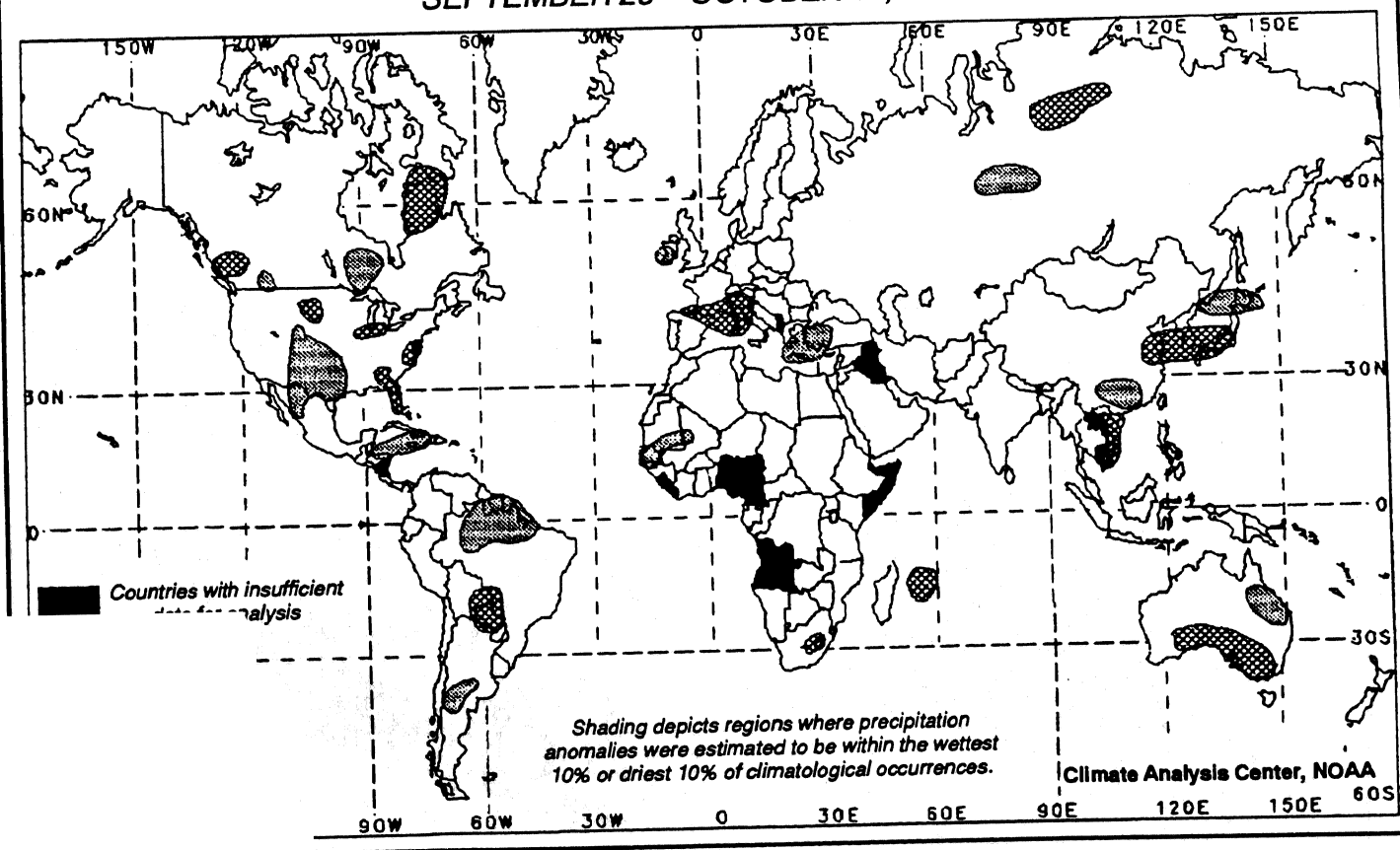
TWO-WEEK GLOBAL TEMPERATURE ANOMALIES

OCTOBER 4 – 17, 1992



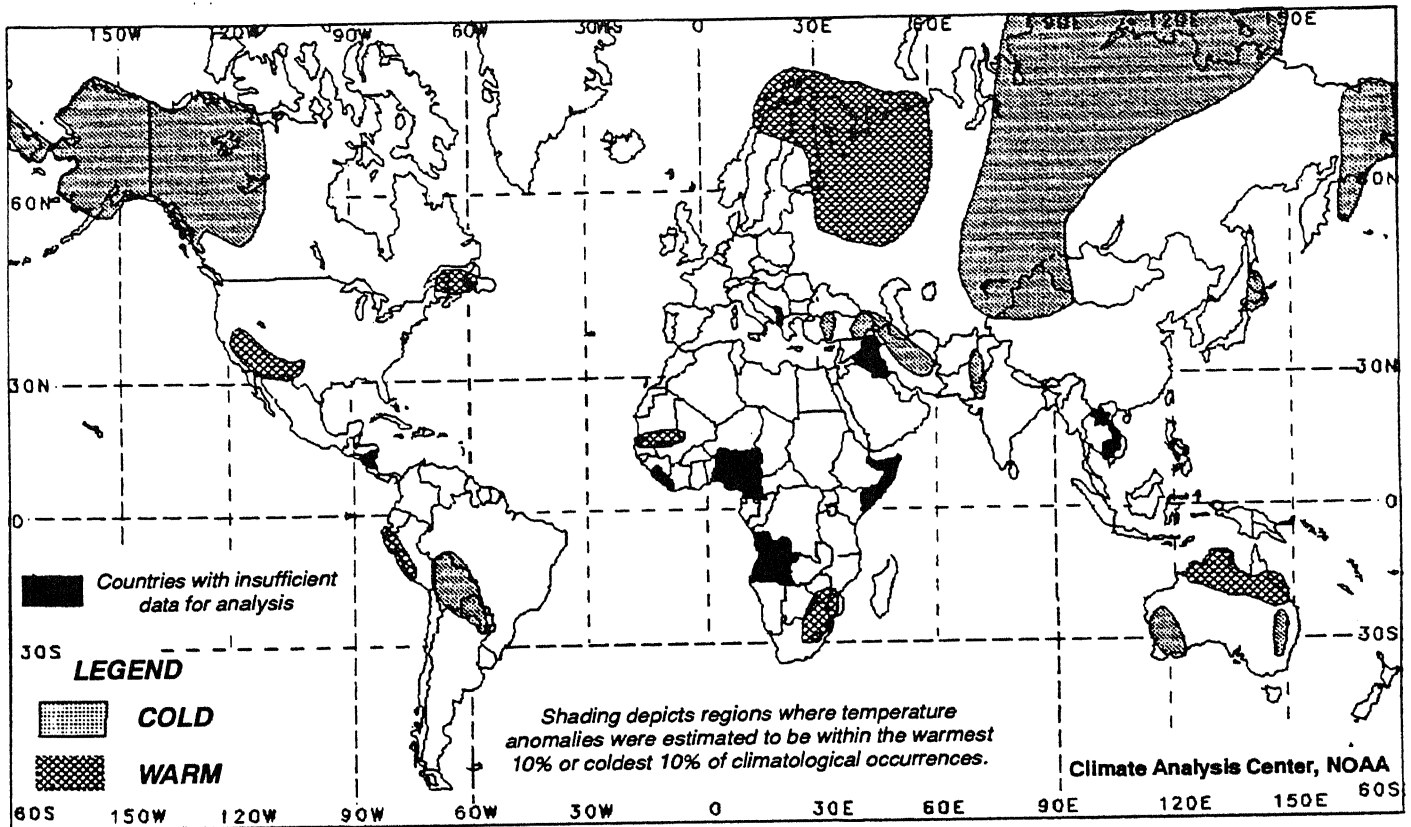
FOUR-WEEK GLOBAL PRECIPITATION ANOMALIES

SEPTEMBER 20 – OCTOBER 17, 1992



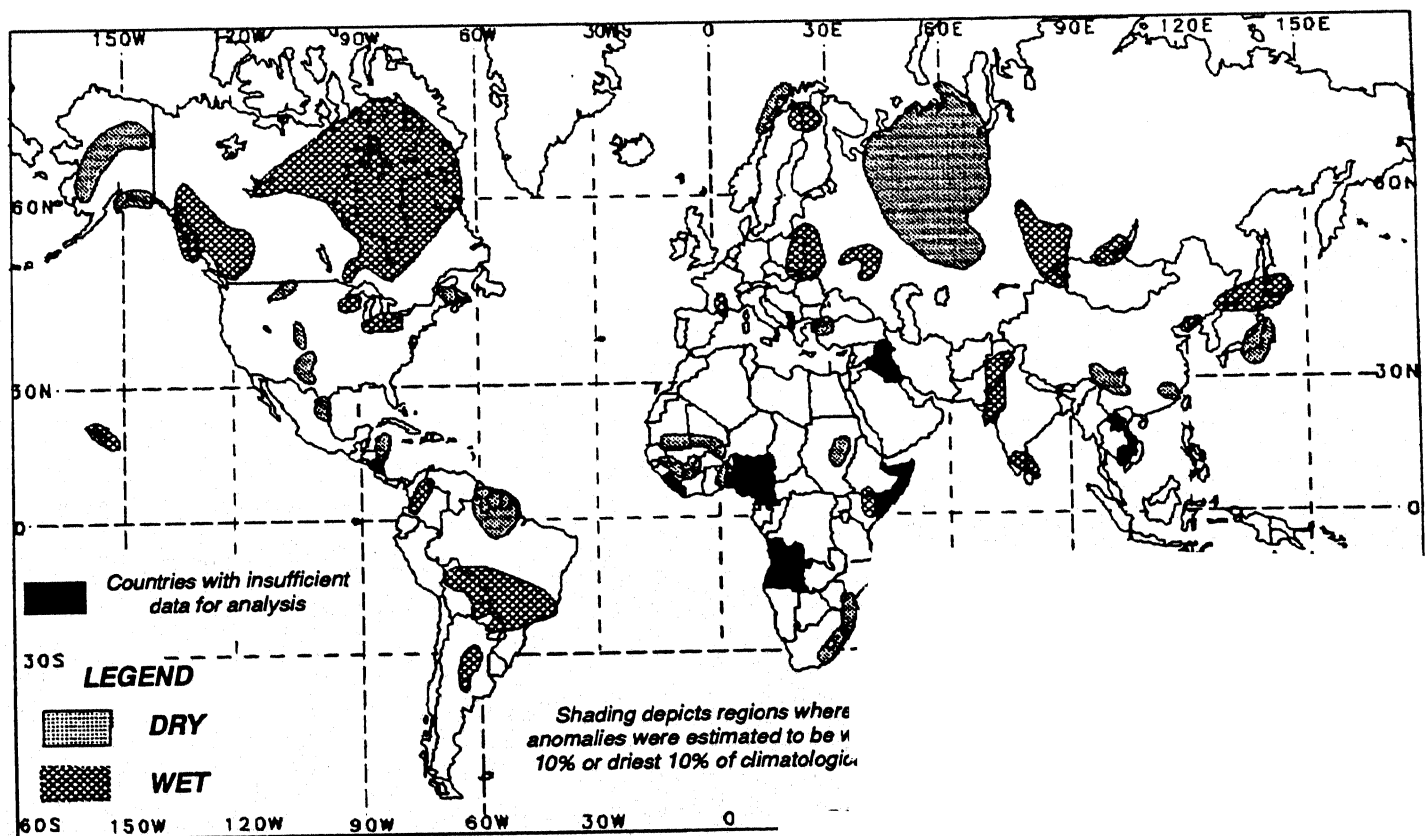
MONTHLY GLOBAL TEMPERATURE ANOMALIES

SEPTEMBER 1992



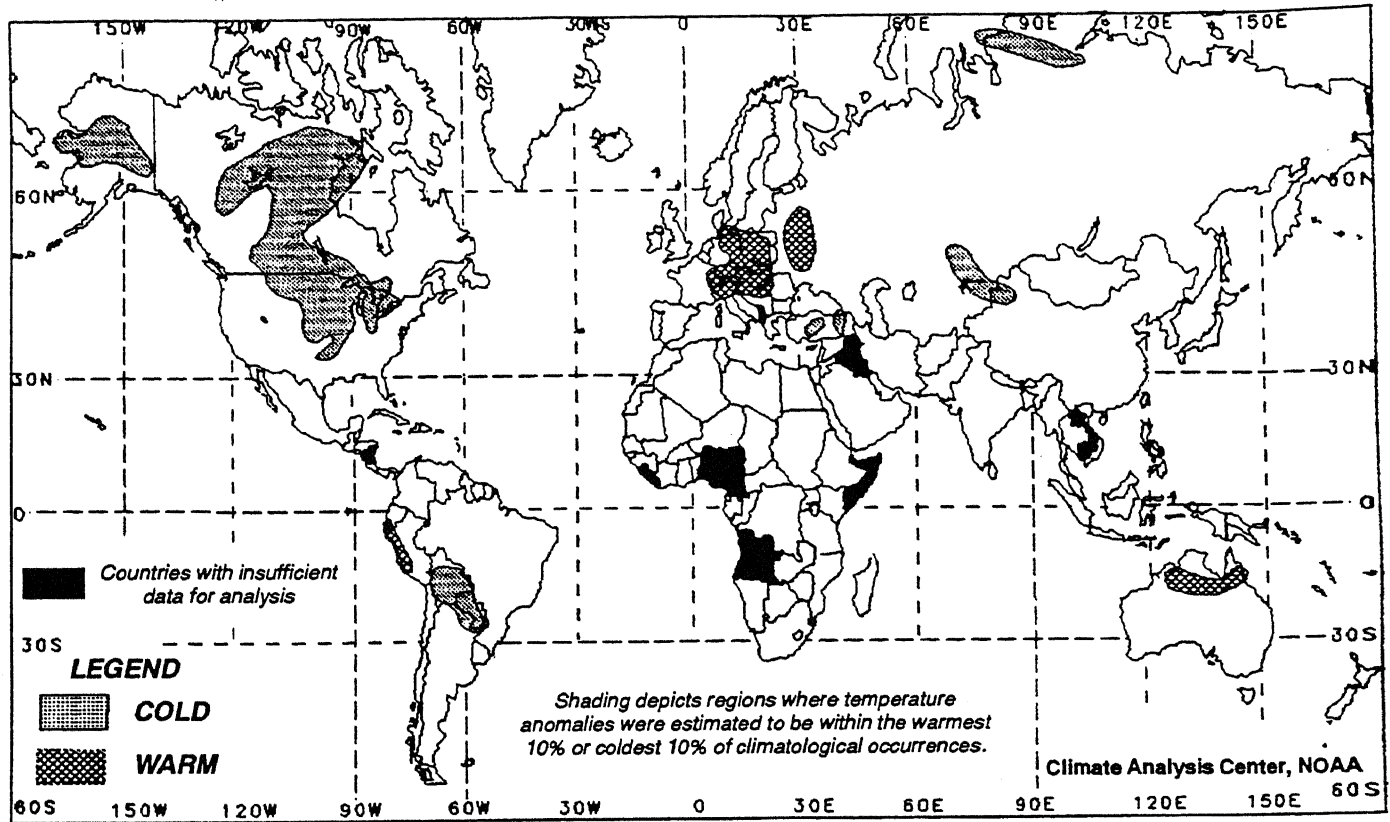
MONTHLY GLOBAL PRECIPITATION ANOMALIES

SEPTEMBER 1992



THREE-MONTH GLOBAL TEMPERATURE ANOMALIES

JULY – SEPTEMBER 1992



THREE-MONTH GLOBAL PRECIPITATION ANOMALIES

JULY – SEPTEMBER 1992

